

IN THE CLAIMS:

1. (currently amended) A computer implemented method for grouping assets included within a portfolio of assets for valuation purposes using a classification and regression tree based model, of asset portfolios, said method comprising the steps of:

defining relevant portfolio segmentations receiving from a seller a proposal to sell a portfolio of assets, the assets included within at least one segment defined by the seller;

assessing performance of computing sum of squared error (SSE) values for the at least one defined portfolio segment using the classification and regression tree based model and the computer, wherein the classification and regression tree based model generates at least one cluster of assets included within the portfolio of assets for valuing each non-underwritten asset included within the at least one cluster, each non-underwritten asset included within the at least one cluster is assigned a value based on an average value assigned to underwritten assets included within the at least one cluster; against a simple model; and

computing SSE values for the at least one defined portfolio segment using a simple model and the computer, wherein the simple model assigns a single value to all non-underwritten assets within the at least one defined portfolio segment based on a value assigned to at least one underwritten asset included within the at least one defined portfolio segment;

computing an error ratio between the SSE values based on the classification and regression tree based model and the SSE values based on the simple model for the at least one defined portfolio segment using the computer;

ranking all the at least one defined portfolio segments segment based upon performance of the models on the computed error ratio; and

using the ranking by a potential buyer to determine an amount to offer for purchasing assets included within the at least one defined portfolio segment.

2. (currently amended) A method according to Claim 1 wherein ~~said step of defining relevant portfolio segmentations further comprises the step of selecting segmentations said step of receiving from a seller a proposal to sell a portfolio of assets, the assets included within at least one segment defined by the seller, further comprises receiving at least one defined portfolio segment that is defined by the seller based upon at least one of pre-defined tranches, unpaid balance amounts, region customer risk and loan rankings.~~

3. (canceled)

4. (canceled)

5. (canceled)

6. (currently amended) A method according to Claim 3 1 further comprising the step of using the classification and regression tree based model as a predictor for the at least one defined portfolio segment if the computed error ratio for at least one defined portfolio segment is less than one.

7. (currently amended) A method according to Claim 1 wherein ~~said step of assessing performance of the classification and regression tree based model against a simple model further comprises the step of computing R<sup>2</sup> wherein the at least one defined portfolio segment is a plurality of defined portfolio segments, said method further comprising computing coefficient of determination (R<sup>2</sup>) values for each asset within each defined portfolio segment, where R<sup>2</sup> per asset is computed as (sum of squares total (SST) per segment - SSE per segment)/(overall SST for all assets within the portfolio × number of assets within each segment).~~

8. (canceled)

9. (currently amended) A method according to Claim 1 wherein ~~said step of ranking all portfolio segments based upon performance of the models further comprises the step of further comprising ranking the at least one defined portfolio segments segment based upon a coefficient~~

of determination ( $R^2$ ) value computed for the at least one defined portfolio segment, where  $R^2 = \frac{1-(SSE / \text{sum of squares total (SST)})}{1}$ .

10. (canceled)

11. (currently amended) A system for grouping assets included within a portfolio of assets for valuation purposes using a classification and regression tree based model, ~~of asset portfolios said system~~ comprising:

a computer configured as a server and a database of asset portfolios; and

at least one client system connected to said server through a network, said server configured to:

~~use a classification and regression tree based model to define relevant portfolio segmentations receive from a seller a proposal to sell a portfolio of assets, the assets included within at least one segment defined by the seller;~~

~~assess performance of compute sum of squared error (SSE) values for the at least one defined portfolio segment using the classification and regression tree based model, wherein the classification and regression tree based model generates at least one cluster of assets included within the portfolio of assets for valuing each non-underwritten asset included with the at least one cluster, each non-underwritten asset included within the at least one cluster is assigned a value based on an average value assigned to underwritten assets included within the at least one cluster; against a simple model and~~

~~compute SSE values for the at least one defined portfolio segment using a simple model, wherein the simple model assigns a single value to all non-underwritten assets within the at least one defined portfolio segment based on a value assigned to at least one underwritten asset included within the at least one defined portfolio segment;~~

compute an error ratio between the SSE values based on the classification and regression tree based model and the SSE values based on the simple model for the at least one defined portfolio segment;

rank all the at least one defined portfolio segments segment based upon performance of the classification and regression tree based model and the simple model on the computed error ratio; and

determine an amount to offer by a potential buyer for purchasing assets included within the at least one defined portfolio segment based on the ranking.

12. (currently amended) A system according to Claim 11 wherein said server is configured to select segmentations the at least one defined portfolio segment is defined by the seller based upon at least one of pre-defined tranches, unpaid balance amounts, region customer risk and asset rankings.

13. (canceled)

14. (canceled)

15. (canceled)

16. (currently amended) A system according to Claim 13 11 wherein said server is configured to use the classification and regression tree based model as a predictor for the at least one defined portfolio segment if the computed error ratio for the at least one defined portfolio segment is less than one.

17. (currently amended) A system according to Claim 11 wherein the at least one defined portfolio segment is a plurality of defined portfolio segments, said server is configured to compute  $R^2$  determination of coefficient (R<sup>2</sup>) values for each asset within each defined portfolio segment, where  $R^2$  per asset is computed as (sum of squares total (SST) per segment - SSE per segment)/(overall SST for all assets × number of assets within each segment).

18. (canceled)

19. (currently amended) A system according to Claim 11 wherein said server is configured to rank the at least one defined portfolio segments segment based upon a coefficient of determination ( $R^2$ ) value computed for the at least one defined portfolio segment, where  $R^2 = \frac{1-(SSE / \text{sum of squares total (SST)})}{1}$ .

20. (canceled)

21. (currently amended) A computer configured for grouping assets included within a portfolio of assets for valuation purposes using a classification and regression tree based model, ~~of asset portfolios~~, said computer including a database of ~~asset~~ portfolios of assets, said computer programmed to:

~~use a classification and regression tree based model to define relevant portfolio segmentations receive from a seller a proposal to sell a portfolio of assets, the assets included within at least one segment defined by the seller;~~

~~assess performance of compute sum of squared error (SSE) values for the at least one defined portfolio segment using the classification and regression tree based model, wherein the classification and regression tree based model generates at least one cluster of assets included within the portfolio of assets for valuing each non-underwritten asset included within the at least one cluster, each non-underwritten asset included within the at least one cluster is assigned a value based on an average value assigned to underwritten assets included within the at least one cluster; against a simple model; and~~

~~compute SSE values for the at least one defined portfolio segment using a simple model, wherein the simple model assigns a single value to all non-underwritten assets within the at least one defined portfolio segment based on a value assigned to at least one underwritten asset included within the at least one defined portfolio segment;~~

compute an error ratio between the SSE values based on the classification and regression tree based model and the SSE values based on the simple model for the at least one defined portfolio segment;

rank all the at least one defined portfolio segments segment based upon performance of the classification and regression tree based model and the simple model on the computed error ratio; and

determine an amount to offer by a potential buyer for purchasing assets included within the at least one defined portfolio segment based on the ranking.

22. (currently amended) A computer according to Claim 21 programmed to select segmentations wherein the at least one defined portfolio segment is defined by the seller based upon at least one of pre-defined tranches, unpaid balance amounts, region customer risk and asset rankings.

23. (canceled)

24. (canceled)

25. (canceled)

26. (currently amended) A computer according to Claim 23 21 programmed to use the classification and regression tree based model as a predictor for the at least one defined portfolio segment if the computed error ratio for the at least one defined portfolio segment is less than one.

27. (currently amended) A computer according to Claim 21 wherein the at least one defined portfolio segment is a plurality of defined portfolio segments, said computer programmed to compute R<sup>2</sup> determination of coefficient (R<sup>2</sup>) values for each asset within each defined portfolio segment, where R<sup>2</sup> per asset is computed as (sum of squares total (SST) per segment - SSE per segment)/(overall SST for all assets × number of assets within each segment).

28. (canceled)

29. (currently amended) A computer according to Claim 21 programmed to rank the at least one defined portfolio segments segment based upon a coefficient of determination ( $R^2$ ) value for the at least one defined portfolio segment, where  $R^2 = 1 - (\text{SSE} / \text{sum of squares total (SST)})$ .

30. (canceled)

31. (new) A method according to Claim 1 wherein the at least one defined portfolio segment is a plurality of defined portfolio segments, said method further comprising using a hybrid model as a predictor by:

using the classification and regression tree based model as a predictor for a first portfolio segment of the plurality of defined portfolio segments; and

using the simple model as a predictor for a second portfolio segment of the plurality of defined portfolio segments.

32. (new) A method according to Claim 7 further comprising ranking portfolio segments of the plurality of defined portfolio segments based on the computed  $R^2$  values.

33. (new) A method according to Claim 7 further comprising using a hybrid model as a predictor by:

using at least one of the classification and regression tree based model and the simple model as a predictor for a first portfolio segment of the plurality of defined portfolio segments; and

using a computed  $R^2$  value of a second portfolio segment of the plurality of defined portfolio segments as a predictor for the second portfolio segment.

34. (new) A system according to Claim 11 wherein the at least one defined portfolio segment is a plurality of defined portfolio segments, said server further configured to use a hybrid model as a predictor by:

using the classification and regression tree based model as a predictor for a first portfolio segment of the plurality of defined portfolio segments; and

using the simple model as a predictor for a second portfolio segment of the plurality of defined portfolio segments.

35. (new) A system according to Claim 17 wherein said server is further configured to rank portfolio segments of the plurality of defined portfolio segments based on the computed  $R^2$  values.

36. (new) A system according to Claim 17 wherein said server is further configured to use a hybrid model as a predictor by:

using at least one of the classification and regression tree based model and the simple model as a predictor for a first portfolio segment of the plurality of defined portfolio segments; and

using a computed  $R^2$  value of a second portfolio segment of the plurality of defined portfolio segments as a predictor for the second portfolio segment.

37. (new) A computer according to Claim 21 wherein the at least one defined portfolio segment is a plurality of defined portfolio segments, said computer further programmed to use a hybrid model as a predictor by:

using the classification and regression tree based model as a predictor for a first portfolio segment of the plurality of defined portfolio segments; and

using the simple model as a predictor for a second portfolio segment of the plurality of defined portfolio segments.

38. (new) A computer according to Claim 27 wherein said computer is further programmed to rank portfolio segments of the plurality of defined portfolio segments based on the computed  $R^2$  values.

39. (new) A computer according to Claim 27 wherein said computer is further programmed to use a hybrid model as a predictor by:

using at least one of the classification and regression tree based model and the simple model as a predictor for a first portfolio segment of the plurality of defined portfolio segments; and

using a computed  $R^2$  value of a second portfolio segment of the plurality of defined portfolio segments as a predictor for the second portfolio segment.

40. (new) A method according to Claim 1 wherein the simple model assigns a single value to all non-underwritten assets within the at least one defined portfolio segment based on at least one of an average value, a median value, a highest value, and a lowest value of the underwritten assets within the at least one defined portfolio segment.

41. (new) A method according to Claim 1 wherein the simple model assigns a single value to all non-underwritten assets within the portfolio of assets based on a value of an underwritten asset within the portfolio of assets.

42. (new) A system according to Claim 11 wherein the simple model assigns a single value to all non-underwritten assets within the at least one defined portfolio segment based on at least one of an average value, a median value, a highest value, and a lowest value of the underwritten assets within the at least one defined portfolio segment.

43. (new) A system according to Claim 11 wherein the simple model assigns a single value to all non-underwritten assets within the portfolio of assets based on a value of an underwritten asset within the portfolio of assets.

44. (new) A computer according to Claim 21 wherein the simple model assigns a single value to all non-underwritten assets within the at least one defined portfolio segment based on at least one of an average value, a median value, a highest value, and a lowest value of the underwritten assets within the at least one defined portfolio segment.

45. (new) A computer according to Claim 21 wherein the simple model assigns a single value to all non-underwritten assets within the portfolio of assets based on a value of an underwritten asset within the portfolio of assets.